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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte YOSHIAKI TANAKA

Appeal 2009-004296
Application 10/654,099
Technology Center 1700

Decided: March 9, 2010

Before EDWARD C. KIMLIN, BRADLEY R. GARRIS, and
PETER F. KRATZ, *Administrative Patent Judges.*

GARRIS, *Administrative Patent Judge.*

DECISION ON APPEAL

Appellant appeals under 35 U.S.C. § 134 from the Examiner's decision rejecting claims 3-18 and 23-38. We have jurisdiction under 35 U.S.C. § 6.

We AFFIRM for the reasons set forth in the Answer and below.

STATEMENT OF THE CASE

Appellant claims an alloy type thermal fuse comprising Sn, Bi, and In wherein "Sn is greater than 46 weight %" (independent claims 3, 4).

Representative independent claim 3 reads as follows:

3. An alloy type thermal fuse comprising a thermal fuse element having an alloy composition in which Sn is greater than 46 weight % and less than or equal to 70 weight %, Bi is at least 1 weight % and less than or equal to 12 weight %, and In is at least 18 weight % and less than 48 weight %, and wherein the composition does not intentionally contain an element whose use is prohibited due to its harmful effects on a living body.

The references set forth below are relied upon by the Examiner as evidence of obviousness:

Cole	GB 2 028 608 A	Mar. 5, 1980
Ishioka (as translated)	JP 403110732 A	May 10, 1991
Tanaka (as translated)	JP 13-266724	Sep. 28, 2001

Under 35 U.S.C. § 103 (a), the Examiner rejects claims 3-10 as being unpatentable over Tanaka, rejects claims 11-18 as being unpatentable over Tanaka in view of Ishioka, and rejects claims 23-38 as being unpatentable over Tanaka or Tanaka in view of Ishioka and further in view of Cole.

In rejecting representative independent claim 3, the Examiner acknowledges that the claim differs from Tanaka by requiring a tin content "greater than 46 weight %" whereas Tanaka's tin content is up to 46 weight % but concludes that "[i]t would have been obvious to one of ordinary skill in the art to select an amount of tin [for the alloy of Tanaka's fuse] slightly greater than 46 weight percent because one skilled in the art would have expected the same properties as an alloy having 46 weight percent tin" (Ans.

4). This obviousness conclusion is supported by well established legal principle. *See Titanium Metals Corp. v. Banner*, 778 F.2d 775, 783 (Fed. Cir. 1985) ("The proportions are so close that prima facie one skilled in the art would have expected them to have the same properties.")

Appellant argues that, "since the alloy compositions themselves do not overlap, the claimed and prior art alloys would not have been expected to have these same properties" (Br. ¶ bridging 8-9). No legal authority has been cited in support of this argument, and the argument is contrary to the well established legal principle cited above. Therefore, we find Appellant's argument unpersuasive.

Appellant further argues that Tanaka teaches away from increasing Sn content since this increase would necessitate a concentration reduction of the other Bi or In elements of the alloy, and Tanaka "teaches away from reducing the Bi concentration" (Br. 9). However, as correctly pointed out by the Examiner (Ans. ¶ bridging pages 6-7), the proposed increase of Tanaka's Sn concentration would be accomplished by decreasing the In concentration, and a decrease of In would not conflict with either the rejected claims or Tanaka. In this regard, we emphasize that Appellant does not contend that Tanaka teaches away from the In concentration decrease which would be necessitated by a slight increase in Tanaka's Sn concentration from 46 weight % to slightly above 46 weight % as proposed by the Examiner.

Additionally, Appellant argues that the claimed concentrations have been shown to be critical and to exhibit unexpected results thereby rebutting any prima facie case of obviousness (Br. 11-13). This argument is unconvincing. As properly indicated by the Examiner (Ans. 7-8), Appellant has provided this record with no comparison of a fuse as defined by

representative independent claim 3 and a fuse of the closest prior art (i.e., Tanaka) in order to thereby establish criticality and unexpected results which are commensurate in scope with the independent claim. *See In re Peterson*, 315 F.3d 1325, 1330-31 (Fed. Cir. 2003) (showing of unexpected results sufficient to overcome prima facie case must be commensurate in scope with claim range). As a consequence, Appellant's discussions of criticality and unexpected results are merely attorney arguments unsupported by evidence. *See In re Lindner*, 457 F.2d 506, 508 (CCPA 1972) (mere lawyers' arguments unsupported by factual evidence are insufficient to establish unexpected results).

For the reasons stated above and in the Answer, Appellant's arguments fail to reveal harmful error in the Examiner's § 103 rejection of representative claim 3 over Tanaka. Appellant has not separately argued with any reasonable specificity the corresponding rejection of claims 4-10. Therefore, we sustain the Examiner's § 103 rejection of claims 3-10 as being unpatentable over Tanaka.

Concerning the § 103 rejection of claims 11-18 over Tanaka in view of Ishioka, Appellant's sole argument is that "the proposed combination with JP '732 [i.e., Ishioka] would not cure the deficiencies with JP '724 [i.e., Tanaka]" (Br. 14). As explained above, we do not consider Tanaka to be deficient in the manner argued by Appellant. As a consequence, we also sustain the Examiner's § 103 rejection of claims 11-18 as being unpatentable over Tanaka in view of Ishioka.

As for the § 103 rejection of claims 23-38, the only separate argument advanced by Appellant is that "[t]here would have been no motivation to modify the proposed JP '724/JP '732 [i.e., Tanaka/Ishioka] thermal fuse by

providing a resistor which is taught to terminate heating in a heating circuit for an electric blanket as taught by GB '608 [i.e., Cole]" (Br. 15). However, this argument fails to specifically address the Examiner's position that "it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the aforementioned references [i.e., Tanaka/Ishioka] by providing a resistor to blow a thermal fuse in order to terminate heating in a heating circuit for an electric blanket, as disclosed by Cole" (Ans. ¶ bridging 5-6; emphasis added). In particular, Appellant's argument fails to explain why the Examiner's proposed modification would not have been motivated "in order to terminate heating in a heating circuit for an electric blanket" (*id.*) as urged by the Examiner. It follows that the argument under consideration fails to reveal harmful error in the rejection of claims 23-38.

Accordingly, we sustain the Examiner's § 103 rejection of claims 23-28 as being unpatentable over Tanaka or Tanaka in view of Ishioka and further in view of Cole.

In summary, we have sustained each of the § 103 rejections advanced by the Examiner in this appeal for the reasons set forth above and in the Answer.

The decision of the Examiner is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

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